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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,114	12/16/2005	Christian Amiens	W51.12-0023	1821
27367 7590 07/28/2010 WESTMAN CHAMPLIN & KELLY, P.A. SUTTE 1400			EXAMINER	
			PATEL, NIMESH	
900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402			ART UNIT	PAPER NUMBER
			2617	
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			07/28/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.	Applicant(s)				
10/561,114	AMIENS, CHRISTIAN				
Examiner	Art Unit				
NIMESH PATEL	2617				

The MAILING DATE of this communication appears on the cover sheet with the correspondence address

Period fo	or Reply				
WHIC - Exter after - If NO - Failu Any	ORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, "HEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Issues of time may be available under the provisions of 37 CFF. 1.136(a). In no event, however, may a reply be timely filed SN: (6) MONTHS from the mailing date of this communication. Not only the provision of the communication of the c				
Status					
1)🛛	Responsive to communication(s) filed on 17 May 2010.				
2a)🛛	This action is FINAL . 2b) This action is non-final.				
3)	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is				
	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.				
Disposit	on of Claims				
4)⊠	Claim(s) 1-22 is/are pending in the application.				
	4a) Of the above claim(s) is/are withdrawn from consideration.				
5)	Claim(s) is/are allowed.				
6)⊠	Claim(s) 1-22 is/are rejected.				
7)	Claim(s) is/are objected to.				
8)□	Claim(s) are subject to restriction and/or election requirement.				
Applicati	on Papers				
9)	The specification is objected to by the Examiner.				
10)	10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.				
	Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).				
	Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).				
11)	The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.				
Priority (ınder 35 U.S.C. § 119				
.—	Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). ☐ All b) ☐ Some * c) ☐ None of:				
	1. Certified copies of the priority documents have been received.				
	2. Certified copies of the priority documents have been received in Application No				
	3. Copies of the certified copies of the priority documents have been received in this National Stage				
	application from the International Bureau (PCT Rule 17.2(a)).				
* 5	See the attached detailed Office action for a list of the certified copies not received.				
Attachmen	t(s) e of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413)				
1/ LI Notic	e or references cited (FTO-692) 4) 🔲 interview summary (PTO-413)				

''/ 🎞	Notice of References Cited (F10-692)
2)	Notice of Draftsperson's Patent Drawing Review (PTO-948)
31	Jeforsontina Pieclacura Statesaastie) (ET/O/SB/RR)

Paper No(s)/Mail Date. ____.
5) Notice of Informal Patent Application

Paper No(s)/Mail Date _____.

6) Other: _____.

Detailed Action

Terminal Disclaimer

The terminal disclaimer filed on June 9, 2010 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 7,698,382 has been reviewed and is NOT accepted because the reel and frame numbers for Wavecom to Sierra Wireless are missing on the 3.73(b) certificate.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousnesstype double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPO2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPO2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPO 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPO 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPO 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a

result of activities undertaken within the scope of a joint research agreement. Effective

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January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer.

A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 20-22 are rejected on the ground of nonstatutory obvious-type double

patenting as being over claims 1 and 17 of U.S. Patent No. 7,698,382.

Claim 1 of current application:

System for remote control of apparatuses, enabling the interconnection between

at least one broker and at least one remote apparatus, said at least one broker carrying out

the MQIsdp protocol,

wherein the system associates to said, at least one remote apparatus,

radiocommunication means comprising,

exchanging means for;

exchanging data between said radiocommunication means and said at least one remote

apparatus according to a set of specific API functions;

exchanging data between said radiocommunication means and said at least one broker

according to said MQIsdp;

interfacing means for interfacing between said specific API functions and said MQIsdp protocol:

so as to enable an interconnection between said at least one broker and said at least one remote via said radiocommunication means without said at least one remote apparatus knowing said MQIsdp protocol.

Claim 1 of U.S. Patent No. 7,698,382:

System for remote control of equipment enabling interconnection between at least one server and at least one remote equipment, said at least one server carrying out the MQIsdp protocol, where MQIsdp represents an MQSeries Integrator SCADA Device Protocol, where SCADA represents Supervisory Control and Data Acquisition, wherein the system associates, with said at least one remote equipment, radiocommunication means comprising:

sending and receiving means for exchanging specific Attention Commands (AT commands) sent by and/or to be sent to an external application used by said at least one remote equipment, wherein said specific AT commands comprise commands for:

- connecting to said at least one server: - sending messages to said at least one server:

- receiving messages from said at least one server;

- communication means for exchanging data with said at least one server according to

said MQIsdp protocol;

interface means for making an interface between said specific AT commands and said

MQIsdp protocol, so as to enable an interconnection between said at least one server and

said at least one remote equipment without requiring knowledge of said MQIsdp protocol

in said at least one remote equipment; and wherein, in at least a first mode, said

radiocommunication means only manage signalling of a data exchange, said data being

transferred directly from

said at least one remote equipment to said at least one server, or vice versa.

Claim 20 of current application:

Method for remote control of apparatuses, enabling the interconnection between at least

one broker and at least one remote apparatus said at least one broker carrying out the

MQIsdp protocol,

wherein the method associates, to said at least one remote apparatus, radiocommunication

means comprising,

exchanging means for;

exchanging data between said radiocommunication means and said at least one remote apparatus according to a set of specific API functions:

exchanging data between said radiocommunication means and said at least one broker according to said MQIsdp protocol;

interfacing means for interfacing between said specific API functions and said MQIsdp protocol;

so as to enable an interconnection between said at least one broker and said at least one remote via said radiocommunication means without said at least one remote apparatus knowing said MQIsdp protocol.

Claim 1 of U.S. Patent No. 7,698,382:

System for remote control of equipment enabling interconnection between at least one server and at least one remote equipment, said at least one server carrying out the MQIsdp protocol, where MQIsdp represents an MQScries Integrator SCADA Device Protocol, where SCADA represents Supervisory Control and Data Acquisition, wherein the system associates, with said at least one remote equipment, radiocommunication means comprising:

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sending and receiving means for exchanging specific Attention Commands (AT

commands) sent by and/or to be sent to an external application used by said at least one

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remote equipment, wherein said specific AT commands comprise commands for:

- connecting to said at least one server; - sending messages to said at least one server;

- receiving messages from said at least one server;

- communication means for exchanging data with said at least one server according to

said MQIsdp protocol;

interface means for making an interface between said specific AT commands and said

MQIsdp protocol, so as to enable an interconnection between said at least one server and

said at least one remote equipment without requiring knowledge of said MQIsdp protocol

in said at least one remote equipment;

and wherein, in at least a first mode, said radiocommunication means only manage

signalling of a data exchange, said data being transferred directly from said at least one

remote equipment to said at least one server, or vice versa.

Claim 21 of current application:

A radiocommunication device comprising:

a remote apparatus; and

radiocommunication means associated with and external to said remote apparatus, the radio communication means comprising.

exchanging means for:

exchanging data between said radiocommunication means and said at least one remote apparatus according to a set of specific API functions;

exchanging data between said radiocommunication means and said at least one broker according to said MOIsdp protocol:

interfacing means for interfacing between said specific API functions and said MQIsdp protocol;

so as to enable an interconnection between said at least one broker and said at least one remote via said radiocommunication means without said at least one remote apparatus knowing said MQIsdp protocol.

Claim 17 of U.S. Patent No. 7,698,382

Device for remote control of equipment enabling interconnection between at least one server and at least one remote equipment, said at least one server carrying out the MQIsdp protocol, where MQIsdp represents an MQSeries Integrator SCADA Device

Protocol, where SCADA represents Supervisory Control and Data Acquisition, wherein the device associates, with said at least one remote equipment, radiocommunication means comprising:

- sending and receiving means for exchanging specific AT commands sent by and or to
 an external application used by said at least one remote equipment, wherein said specific
 AT commands comprise commands for\- connecting to said at least one server;
- sending messages to said at least one server; receiving messages from said at least one server;
- communication means for exchanging data with said at least one server according to said MQIsdp protocol;
- interface means for making an interface between said specific AT commands and said MQIsdp protocol, so as to enable an interconnection between said at least one server(s) and said at least one remote equipment, without requiring additional processing and / or
- data formatting means in said at least one remote equipment, and wherein, in at least
 a first mode, said radiocommunication means only manage signaling of a data
 exchange, said data being transferred directly from said at least one remote equipment
 to said at least one server, or vice versa.

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Claim 22 of current application:

A device comprising:

a radiocommunication module; and

radiocommunication means associated with and external to the radiocommunication module, the radiocommunication means comprising.

exchanging means for;

exchanging data between said radiocommunication means and said at least one remote apparatus according to a set of specific API functions;

exchanging data between said radiocommunication means and said at least one broker according to said MOIsdp protocol;

interfacing means for interfacing between said specific API functions and said MQIsdp protocol:

so as to enable an interconnection between said at least one broker and said at least one remote via said radiocommunication means without said at least one remote apparatus

knowing said MQIsdp protocol.

Claim 17 of U.S. Patent No. 7,698,382

Device for remote control of equipment enabling interconnection between at least one

server and at least one remote equipment, said at least one server carrying out the

MQIsdp protocol, where MQIsdp represents an MQSeries Integrator SCADA Device

Protocol, where SCADA represents Supervisory Control and Data Acquisition, wherein

the device associates, with said at least one remote equipment, radiocommunication

means comprising:

- sending and receiving means for exchanging specific AT commands sent by and or to

an external application used by said at least one remote equipment, wherein said specific

AT commands comprise commands for\- - connecting to said at least one server;

- sending messages to said at least one server; - receiving messages from said at least one

server;

- communication means for exchanging data with said at least one server according to

said MQIsdp protocol;

- interface means for making an interface between said specific AT commands and said

MQIsdp protocol, so as to enable an interconnection between said at least one

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server(s) and said at least one remote equipment, without requiring

additional processing and / or

- data formatting means in said at least one remote equipment, and wherein, in at least

a first mode, said radiocommunication means only manage signaling of a data

exchange, said data being transferred directly from said at least one remote equipment

to said at least one server, or vice versa.

Although the conflicting claims are not identical, they are not patentably distinct from

each other because claims 1 and 20 – 22 of the present application are broadening from

claims 1 and 17 of U.S. Patent No. 7,698,382. For example claim 2 (which depends on

claim 1) of 17 of U.S. Patent No. 7,698,382 teaches every limitation of claim 5 of the

current application.

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to omit elements when the remaining elements perform the same. A

person of ordinary skill in the art could have arrived at the present claims by omitting the

details of the patented claims. See In re Karlson, 136 USPO, 184 (CCPA) 136 USPO

184, decided January 16, 1963. (Omission of an element and its function is an obvious

expedient if the remaining elements perform the same function as before).

Response to Arguments

2. Applicant's arguments filed May 17, 2010 have been fully considered but they are not

persuasive.

The Applicant's argument, "there is nothing in Andy that discloses or suggests the integration, between the remote terminal and the terminal, of radiocommunication means that assure, the specific API functions and the MQIsdp protocol, an interconnection between the remote terminal and the broker and the implementation of data exchanges between those two entities in a transparent way for the remote terminal", "rather, the corresponding functions are handled by the radiocommunication means according to the present invention recited in claim 1", and 'Ichihira does not disclose a system for remotely controlling equipment, which enables interconnection between one or more brokers (carrying out the protocol MQIsdp) and one or more remote equipment", on page 10, lines 3 – 8, page 10, lines 22 – 24 and page 11, lines 15 – 17.

The Examiner's response,"Andy discloses, the MQ SCADA protocol node is included in WebSphere MQ Integrator, version 2.02 and higher. This allows remote device to connect to the broker using the MQIsdp protocol – page 2, lines 16-24, page 5, lines 1-7, page 9, lines 1-8.

Andy also discloses, Acrom director units communicates with the devices using 20-mile line-of-sight, pread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 12, lines 2 – 4. Telemetry data comes from variety of remote monitoring stations, such as oil and gas pipeline sensors, transmitted using TCP/IP over telecommunications links, ranging from dial-up phone connection to satellite link – page

3, lines 9 - 11.

At the same time, Inchihara teaches, the base station having CDMA transmitter for transmitting downlink communication to the mobile station and the TDMA receiver for receiving uplink communication from the mobile station. Here, the mixed type of a communication system is being taught, where downlink uses one type of protocol while, the uplink uses different type of protocol - ABSTRACT, Fig. 3, column 2, line 24 through column 3, line 2, column 3, line 66 through column 4, line 28, claims 1, 2.

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The combined Andy and Inchihare teaches the claimed features, considering a mixed type of a digital mobile communication system in which the CDMA method is used for a down line, and the TDMA method is used for a up line that will have effective utilization of CDMA downlink, and TDMA uplink properties - Ichihara, column 1, line 52 through column 2. line 13".

Claim Rejections - 35 USC § 103

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordnary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Determining the scope and contents of the prior art.

- 2. Ascertaining the differences between the prior art and the claims at issue.
- Resolving the level of ordinary skill in the pertinent art.

 Considering objective evidence present in the application indicating obviousness or nonohyjousness.

Claims 1 – 3, 8, and 11 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andy XP – 002283767 March 2002, and in view of Ichihara. US Patent: 5.640.413 Jun. 17, 1997.

Regarding claim 1, Andy discloses,

system for remote control of apparatuses (telemetry integration applications – page 2, lines 8 – 10, page 4, lines 9 – 21, page 9, line 8), enabling the interconnection between at least one broker (broker, page 5, line 3) and at least one remote apparatus (client, page 5, line 5), said at least one broker carrying out the MQIsdp protocol (the MQ SCADA protocol node is included in WebSphere MQ Integrator, version 2.02 and higher. This allows remote device to connect to the broker using the MQIsdp protocol – page 2, lines 16 – 24, page 5, lines 1 – 7, page 9, lines 1 – 8),

wherein the system associates to said, at least one remote apparatus, radiocommunication means (Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Linc Group – page 5, lines 12 – 17, page 12, lines, 2 – 4. Telemetry data comes from variety of remote monitoring stations, such as oil and gas pipeline sensors, transmitted using TCP/IP over

telecommunications links, ranging from dial-up phone connection to satellite link – page 3, lines 9 - 11) comprising,

exchanging means (Acrom director units communicates with the devices using 20-mile line-of-sight, pread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 12, lines 2 – 4) for exchanging data between said radiocommunication means and said at least one remote apparatus according to a set of specific API functions (Acrom director units communicates with the devices using 20-mile line-of-sight, pread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 12, lines 2 – 4. Telemetry data comes from variety of remote monitoring stations, such as oil and gas pipeline sensors, transmitted using TCP/IP over telecommunications links, ranging from dial-up phone connection to satellite link – page 3, lines 9 - 11);

exchanging data between said radiocommunication means and said at least one broker according to said MQIsdp protocol (the protocol has a very basic publish/subscribe verb set: connect, disconnect, subscribe, and unsubscribe; and an application level keepalive: pingrqueest and pingresponse - page 9, lines 24 - 27. When an MQIsdp client connects to the broker, it can optionally specify a special message and topic, and a keepalive time, specified in seconds. If the client fails to publish anything to the broker during the keepalive time the broker assumes the client was unexpectedly disconnected and closes the client connection. The broker then publishes the special message using the specified topic on behalf of the client – page 10, lines 20 – 27. The application programming

interface - API presented to applications on the client device - page 9, lines 15 - 17, page 10, lines 1 - 4);

interfacing means for interfacing between said specific API functions and said MQIsdp protocol (the MQIsdp protocol specification is deliberately nonprescriptive regarding the application programming interface – API presented to applications to the client device - page 9, lines 9 – 24, page 5, lines 1 – 7);

so as to enable an interconnection between said at least one broker and said at least one remote via said radiocommunication means (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27).

but, is silent on, "without said at least one remote apparatus knowing said MQIsdp protocol".

Inchihara teaches, the base station having CDMA transmitter for transmitting downlink communication to the mobile station and the TDMA receiver for receiving uplink communication from the mobile station (Fig. 3, ABSTRACT, column 2, line 24 through column 3, line 2, column 3, line 6 through column 4, line 28, claims 1, 2).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify monitoring and telemetry devices as part of enterprise information resources (Andy, page 2, lines 8 – 10, page 4, lines 9 – 21, page 9, line 8), would have incorporated the mixed type digital mobile communication in which CDMA method is used for a down link, and the TDMA is used for uplink of Ichihara (Ichihara, Fig. 3, where uplink and down link communication using different kinds of signals), for considering a mixed type of a digital mobile communication system in which the CDMA method is used for a down line, and the TDMA method is used for a up line that will have effective utilization of CDMA downlink, and TDMA uplink properties (Ichihara, column 1, line 52 through column 2, line 13).

Regarding claim 2, Andy discloses,

system for remote control of apparatuses according to claim 1, wherein said radiocommunication means include a radiocommunication module, grouping together on a single substrate all of the radiofrequency and baseband data processing means, as well as means for managing said set of specific API functions (Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 8, lines 31 – 32, page 12, lines, 2 – 11, page 12, lines 16 - 20).

Regarding claim 3, Andy discloses.

system for remote control of apparatuses according claim I, wherein said radiocommunication means integrate said MQIsdp protocol in the form of a library, defining said set of specific API functions (Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Linc Group – page 5, lines 12 – 17, page 8, lines 31 – 32, page 12, lines, 2 – 11, page 12, lines 16 – 20).

Regarding claim 8, Andy discloses,

system for remote control of apparatuses according to claim I, wherein said set of specific API functions includes functions enabling (the MQ SCADA protocol node is included in WebSphere MQ Integrator, version 2.02 and higher. This allows remote device to connect to the broker using the MQIsdp protocol – page 2, lines 16 – 24, page 5, lines 1 – 7, page 9, lines 1 – 8):

- connection to one of said at least one broker (the MQ SCADA protocol node is
 included in WebSphere MQ Integrator, version 2.02 and higher. This allows remote
 device to connect to the broker using the MQIsdp protocol page 2, lines 16 24,
 page 5, lines 1 7, page 9, lines 1 8);
- sending of messages (Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Linc Group page 5,
 lines 12 17, page 12, lines, 2 4. The protocol has a very basic publish/subscribe

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verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1-8, page 3, 22-24, page 5, lines 1-7, page 8, lines 14-32, page 9, lines 24-27);

- receiving of messages (Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Line Group page 5, lines 12 17, page 12, lines, 2 4. The protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe page 3, lines 1 8, page 3, 22 24, page 5, lines 1 7, page 8, lines 14 32, page 9, lines 24 27. Also,
- configuration of at least one parameter (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe page 3, lines 1 8, page 3, 22 24, page 5, lines 1 7, page 8, lines 14 32, page 9, lines 24 27).

compute values from input message content - page 8, line26);

Regarding claim 11, Andy discloses,

system for remote control of apparatuses according to claim I, wherein said set of specific (API) functions includes an initialisation function restoring default parameters, which must be called at least once before the use of other - API functions (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27).

Regarding claim 12, Andy discloses,

system for remote control of apparatuses according to claim I, wherein said set of specific - API functions includes a function called when an IP connection has been established (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27).

Regarding claim 13, Andy discloses,

system for remote control of apparatuses according to claim I, wherein the system includes a function of establishing a connection with one of said brokers making it possible to define parameters of said connection, and a function for disconnecting said connection (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27).

Regarding claim 14, Andy discloses,

system for remote control of apparatuses according to claim 13, wherein said function of establishing a connection makes it possible to select a transmission mode from at least two modes (the MQ SCADA protocol node is included in WebSphere MQ Integrator,

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version 2.02 and higher. This allows remote device to connect to the broker using the MQIsdp protocol – page 2, lines 16 – 24, page 5, lines 1 – 7, page 9, lines 1 – 8. Typical application scenario – farmers walk their fields with a Global System for Mobile Communications - GSM connected Palm Pilot - page 8, left column),

but, is silent on, "selecting a transmission mode from at least two modes".

Inchihara teaches, the base station having CDMA transmitter for transmitting downlink communication to the mobile station and the TDMA receiver for receiving uplink communication from the mobile station (Fig. 3, ABSTRACT, column 2, line 24 through column 3, line 2, column 3, line 66 through column 4, line 28, claims 1, 2).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify monitoring and telemetry devices as part of enterprise information resources (Andy, page 2, lines 8 – 10, page 4, lines 9 – 21, page 9, line 8), would have incorporated the mixed type digital mobile communication in which CDMA method is used for a down link, and the TDMA is used for uplink of Ichihara (Ichihara, Fig. 3, where uplink and down link communication using different kinds of signals), for considering a mixed type of a digital mobile communication system in which the CDMA method is used for a down line, and the TDMA method is used for a up line that will have effective utilization of CDMA downlink, and TDMA uplink properties (Ichihara, column 1, line 52 through column 2, line 13).

Regarding claim 15, Andy discloses,

system for remote control of apparatuses according to claim I, wherein the system includes a function for sending a message to one of said brokers (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27).

Regarding claim 16, Andy discloses,

system for remote control of apparatuses according to claim 1, wherein the system includes a function for subscribing to one of said brokers, and a function for unsubscribing to said broker (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27).

Regarding claim 17, Andy discloses,

system for remote control of apparatuses according to claim I, wherein the system includes at least one function for requesting information on at least one aspect of a communication in progress (the protocol has a very basic publish/subscribe verb set:

connect, disconnect, publish, subscribe, unsubscribe, and an application level keepalive: pingrequest and pingresponse. Message acknowledgement verbs are used to manage the assured message delivery – page 3, lines 1-8, page 3, 22-24, page 5, lines 1-7, page 8, lines 14-32, page 9, lines 24-27).

Regarding claim 18, Andy discloses,

system for remote control of apparatuses according to claim 17, wherein the system includes at least one of the functions belonging to the group including:

- a function for inquiring about the status of a connection (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe, and an application level keepalive: pingrequest and pingresponse. Message acknowledgement verbs are used to manage the assured message delivery page 3, lines 1 8, page 3, 22 24, page 5, lines 1 7, page 8, lines 14 32, page 9, lines 24 27, page 11, lines 5 17);
- a function for inquiring about the status of a given message (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe, and an application level keepalive: pingrequest and pingresponse. Message acknowledgement verbs are used to manage the assured message delivery page 3, lines 1 8, page 3, 22 24, page 5, lines 1 7, page 8, lines 14 32, page 9, lines 24 27);

- a function for inquiring about the current size of a queue (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe, and an application level keepalive: pingrequest and pingresponse. Message acknowledgement verbs are used to manage the assured message delivery page 3, lines 1-8, page 3, 22-24, page 5, lines 1-7, page 8, lines 14-32, page 9, lines 24-27); and
- a function for inquiring about the space available in a queue (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe, and an application level keepalive: pingrequest and pingresponse. Message acknowledgement verbs are used to manage the assured message delivery page 3, lines 1 8, page 3, 22 24, page 5, lines 1 7, page 8, lines 14 32, page 9, lines 24 27).

Regarding claim 19, Andy discloses,

system for remote control of apparatuses according to claim I, wherein the system includes a function for defining the size of a queue (WebSphere MQ offers once-and-once-only assured delivery of messages, using asynchronous queue-based model – page 7, lines26 – 28. The protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe, and an application level keepalive: pingrequest and pingresponse. Message acknowledgement verbs are used to manage the assured message delivery – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page

8, lines 14 - 32

Regarding claim 20, Andy discloses,

method for remote control of apparatuses (telemetry integration applications - page 2,

lines 8-10, page 4, lines 9-21, page 9, line 8), enabling the interconnection between at

least one broker (broker, page 5, line 3) and at least one remote apparatus (client, page 5,

line 5) said at least one broker carrying out the MQIsdp protocol (the MQ SCADA

protocol node is included in WebSphere MQ Integrator, version 2.02 and higher. This

allows remote device to connect to the broker using the MQIsdp protocol - page 2, lines

16 - 24, page 5, lines 1 - 7, page 9, lines 1 - 8),

wherein the method associates, to said at least one remote apparatus, radiocommunication

means (Arcom director units communicates with the devices using 20-mile line-of-sight,

spread-spectrum wireless links from Data-Linc Group - page 5, lines 12 - 17, page 12,

lines, 2 - 4. Telemetry data comes from variety of remote monitoring stations, such as oil

and gas pipeline sensors, transmitted using TCP/IP over telecommunications links,

ranging from dial-up phone connection to satellite link - page 3, lines 9 - 11) comprising,

exchanging means (Acrom director units communicates with the devices using 20-mile

line-of-sight, pread-spectrum wireless links from Data-Linc Group - page 5, lines 12 -

17, page 12, lines 2 - 4) for;

exchanging data between said radiocommunication means and said at least one remote apparatus according to a set of specific API functions (Acrom director units communicates with the devices using 20-mile line-of-sight, pread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 12, lines 2 – 4. Telemetry data comes from variety of remote monitoring stations, such as oil and gas pipeline sensors, transmitted using TCP/IP over telecommunications links, ranging from dial-up phone connection to satellite link – page 3, lines 9 - 11);

exchanging data between said radiocommunication means and said at least one broker according to said MQIsdp protocol (the protocol has a very basic publish/subscribe verb set: connect, disconnect, subscribe, and unsubscribe; and an application level keepalive: pingrqueest and pingresponse - page 9, lines 24 - 27. When an MQIsdp client connects to the broker, it can optionally specify a special message and topic, and a keepalive time, specified in seconds. If the client fails to publish anything to the broker during the keepalive time the broker assumes the client was unexpectedly disconnected and closes the client connection. The broker then publishes the special message using the specified topic on behalf of the client – page 10, lines 20 – 27. The application programming interface - API presented to applications on the client device - page 9, lines 15 – 17, page 10, lines 1 – 4):

interfacing means for interfacing between said specific API functions and said MQIsdp protocol (the MOIsdp protocol specification is deliberately nonprescriptive regarding the application programming interface – API presented to applications to the client device - page 9, lines 9 – 24, page 5, lines 1 – 7);

so as to enable an interconnection between said at least one broker and said at least one remote via said radiocommunication means (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27).

but, is silent on, "without said at least one remote apparatus knowing said MQIsdp protocol".

Inchihara teaches, the base station having CDMA transmitter for transmitting downlink communication to the mobile station and the TDMA receiver for receiving uplink communication from the mobile station (Fig. 3, ABSTRACT, column 2, line 24 through column 3, line 2, column 3, line 66 through column 4, line 28, claims 1, 2).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify monitoring and telemetry devices as part of enterprise information resources (Andy, page 2, lines 8-10, page 4, lines 9-21, page 9, line 8), would have incorporated the mixed type digital mobile communication in which CDMA method is used for a down link, and the TDMA is used for uplink of Ichihara (Ichihara, Fig. 3, where uplink

and down link communication using different kinds of signals), for considering a mixed type of a digital mobile communication system in which the CDMA method is used for a down line, and the TDMA method is used for a up line that will have effective utilization of CDMA downlink, and TDMA uplink properties (Ichihara, column 1, line 52 through column 2, line 13).

Regarding claim 21, Andy discloses,

a radiocommunication device comprising:

a remote apparatus (client, page 5, line 5. Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 12, lines, 2 - 4); and

radiocommunication means associated with and external to said remote apparatus, the radio communication means (Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Linc Group – page 5, lines 12 – 17, page 12, lines, 2 – 4. Telemetry data comes from variety of remote monitoring stations, such as oil and gas pipeline sensors, transmitted using TCP/IP over telecommunications links, ranging from dial-up phone connection to satellite link – page 3, lines 9 - 11) comprising,

exchanging means (Acrom director units communicates with the devices using 20-mile line-of-sight, pread-spectrum wireless links from Data-Linc Group – page 5, lines 12-17, page 12, lines 2-4) for;

exchanging data between said radiocommunication means and said at least one remote apparatus according to a set of specific API functions (Acrom director units communicates with the devices using 20-mile line-of-sight, pread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 12, lines 2 – 4. Telemetry data comes from variety of remote monitoring stations, such as oil and gas pipeline sensors, transmitted using TCP/IP over telecommunications links, ranging from dial-up phone connection to satellite link – page 3, lines 9 - 11);

exchanging data between said radiocommunication means and said at least one broker according to said MQIsdp protocol (the protocol has a very basic publish/subscribe verb set: connect, disconnect, subscribe, and unsubscribe; and an application level keepalive: pingrqueest and pingresponse - page 9, lines 24 - 27. When an MQIsdp client connects to the broker, it can optionally specify a special message and topic, and a keepalive time, specified in seconds. If the client fails to publish anything to the broker during the keepalive time the broker assumes the client was unexpectedly disconnected and closes the client connection. The broker then publishes the special message using the specified topic on behalf of the client – page 10, lines 20 – 27. The application programming interface - API presented to applications on the client device – page 9, lines 15 – 17, page

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10, lines 1 - 4);

interfacing means for interfacing between said specific API functions and said MQIsdp protocol (the MQIsdp protocol specification is deliberately nonprescriptive regarding the application programming interface – API presented to applications to the client device - page 9, lines 9 – 24, page 5, lines 1 – 7);

so as to enable an interconnection between said at least one broker and said at least one remote via said radiocommunication means (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27),

but, is silent on, "without said at least one remote apparatus knowing said MQIsdp protocol".

Inchihara teaches, the base station having CDMA transmitter for transmitting downlink communication to the mobile station and the TDMA receiver for receiving uplink communication from the mobile station (Fig. 3, ABSTRACT, column 2, line 24 through column 3, line 2, column 3, line 66 through column 4, line 28, claims 1, 2).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to

modify monitoring and telemetry devices as part of enterprise information resources (Andy, page 2, lines 8-10, page 4, lines 9-21, page 9, line 8), would have incorporated the mixed type digital mobile communication in which CDMA method is used for a down link, and the TDMA is used for uplink of Ichihara (Ichihara, Fig. 3, where uplink and down link communication using different kinds of signals), for considering a mixed type of a digital mobile communication system in which the CDMA method is used for a down line, and the TDMA method is used for a up line that will have effective utilization of CDMA downlink, and TDMA uplink properties (Ichihara, column 1, line 52 through column 2, line 13).

Regarding claim 22, Andy discloses,

A device (the MQ SCADA protocol node is included in WebSphere MQ Integrator, version 2.02 and higher. This allows remote device to connect to the broker using the MQIsdp protocol – page 2, lines 16 – 24, page 5, lines 1 – 7, page 9, lines 1 – 8. Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 12, lines, 2 - 4) comprising:

a radiocommunication module (Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Line Group – page 5. lines 12 – 17. page 12. lines. 2 – 4. Telemetry integration applications – page 2. lines 8

- 10, page 4, lines 9 - 21, page 9, line 8) and

radiocommunication means associated with an external to the radiocommunication module, the radiocommunication means (Arcom director units communicates with the devices using 20-mile line-of-sight, spread-spectrum wireless links from Data-Linc Group – page 5, lines 12 – 17, page 12, lines, 2 – 4. Telemetry data comes from variety of remote monitoring stations, such as oil and gas pipeline sensors, transmitted using TCP/IP over telecommunications links, ranging from dial-up phone connection to satellite link – page 3, lines 9 – 11) comprising,

exchanging means (Acrom director units communicates with the devices using 20-mile line-of-sight, pread-spectrum wireless links from Data-Linc Group – page 5, lines 12 – 17, page 12, lines 2 – 4) for;

exchanging data between said radiocommunication means and said at least one remote apparatus according to a set of specific API functions (Acrom director units communicates with the devices using 20-mile line-of-sight, pread-spectrum wireless links from Data-Line Group – page 5, lines 12 – 17, page 12, lines 2 – 4. Telemetry data comes from variety of remote monitoring stations, such as oil and gas pipeline sensors, transmitted using TCP/IP over telecommunications links, ranging from dial-up phone connection to satellite link – page 3, lines 9 - 11);

exchanging data between said radiocommunication means and said at least one broker according to said MQIsdp protocol (the protocol has a very basic publish/subscribe verb set: connect, disconnect, subscribe, and unsubscribe; and an application level keepalive: pingrqueest and pingresponse - page 9, lines 24 - 27. When an MQIsdp client connects to the broker, it can optionally specify a special message and topic, and a keepalive time, specified in seconds. If the client fails to publish anything to the broker during the keepalive time the broker assumes the client was unexpectedly disconnected and closes the client connection. The broker then publishes the special message using the specified topic on behalf of the client – page 10, lines 20 - 27. The application programming interface - API presented to applications on the client device - page 9, lines 15 - 17, page 10, lines 1 - 4):

interfacing means for interfacing between said specific API functions and said MQIsdp protocol (the MQIsdp protocol specification is deliberately nonprescriptive regarding the application programming interface – API presented to applications to the client device - page 9, lines 9 – 24, page 5, lines 1 – 7);

so as to enable an interconnection between said at least one broker and said at least one remote via said radiocommunication means (the protocol has a very basic publish/subscribe verb set: connect, disconnect, publish, subscribe, unsubscribe – page 3, lines 1 – 8, page 3, 22 – 24, page 5, lines 1 – 7, page 8, lines 14 – 32, page 9, lines 24 – 27).

but, is silent on, "without said at least one remote apparatus knowing said MQIsdp protocol".

Inchihara teaches, the base station having CDMA transmitter for transmitting downlink communication to the mobile station and the TDMA receiver for receiving uplink communication from the mobile station (Fig. 3, ABSTRACT, column 2, line 24 through column 3, line 2, column 3, line 66 through column 4, line 28, claims 1, 2).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify monitoring and telemetry devices as part of enterprise information resources (Andy, page 2, lines 8 – 10, page 4, lines 9 – 21, page 9, line 8), would have incorporated the mixed type digital mobile communication in which CDMA method is used for a down link, and the TDMA is used for uplink of Ichihara (Ichihara, Fig. 3, where uplink and down link communication using different kinds of signals), for considering a mixed type of a digital mobile communication system in which the CDMA method is used for a down line, and the TDMA method is used for a up line that will have effective utilization of CDMA downlink, and TDMA uplink properties (Ichihara, column 1, line 52 through column 2, line 13).

Claims 4-7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Andy XP – 002283767 March 2002, and in view of Ichihara, US Patent: 5,640,413 Jun.

17, 1997 and further in view of Petite US Patent: US 7,103,511 B2. Sep. 5, 2006.

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Regarding claim 4, Andy and Ichihara discloses all the claimed features.

but, are silent on, system for remote control of apparatuses according to claim I, wherein at least in a first mode, said radiocommunication means manage, with said "data being transferred directly from a remote apparatus to a server, or the reverse".

Petite teaches, method for monitoring and controlling remote devices. The computer evaluates the retrieved information and identifies an appropriate control signal, and applying the control signal at a designated actuator. A computerized system for monitoring, reporting on, and controlling remote systems by transferring information signals through a wide area network. The site controller 150 may be configured such that the memory 406 includes a look-up table 414 configured for identifying the various remote and intermediate communication devices used in generating and transmitting received data transmission (ABSTRACT, Figs. 1 – 11, column 1, lines 31 – 36, column 2, line 28 through column 3, line 30, column 11, lines 11 - 15).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify monitoring and telemetry devices as part of enterprise information resources (combined Andy and Ichihara, wherein, Andy, page 2, lines 8 – 10, page 4, lines 9 – 21, page 9, line 8), would have incorporated monitoring and controlling remote devices of Petite (Petete, ABSTRACT, Figs. 1 – 11, column 1, lines 31 – 36, column 2, line 28 through column 3, line 30, column 11, lines 11 - 15), for a system configured to collect, format, and control client application specific processes (Petite, column 1, lines 48 - 55).

Regarding claim 5, Andy and Ichihara discloses all the claimed features,

but, are silent on, system for remote control of apparatuses according to claim I, at least in a second mode, said radiocommunication means "manage the signaling of a data exchange and the transfer of said data, with the latter being temporarily stored in at least one buffer storage".

Petite teaches, method for monitoring and controlling remote devices. The computer evaluates the retrieved information and identifies an appropriate control signal, and applying the control signal at a designated actuator. A computerized system for monitoring, reporting on, and controlling remote systems by transferring information signals through a wide area network. The site controller 150 may be configured such that the memory 406 includes a look-up table 414 configured for identifying the various remote and intermediate communication devices used in generating and transmitting received data transmission (ABSTRACT, Figs. 1 – 11, column 1, lines 31 – 36, column 2, line 28 through column 3, line 30, column 11, lines 11 - 15).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify monitoring and telemetry devices as part of enterprise information resources (combined Andy and Ichihara, wherein Andy, page 2, lines 8 – 10, page 4, lines 9 – 21, page 9, line 8), would have incorporated monitoring and controlling remote devices of Petite (Petete. ABSTRACT, Figs. 1 – 11, column 1, lines 31 – 36, column 2.

line 28 through column 3, line 30, column 11, lines 11 - 15), for a system configured to collect, format, and control client application specific processes (Petite, column 1, lines 48 - 55, and Andy, enrich the content of the message, or to insert or update rows in a database - page 8, lines 4 - 8, page 8, lines 28 - 30).

Regarding claim 6, Andy discloses,

system for remote control of apparatuses according to claim 5, wherein the size of said at least one buffer storage is parameterable (it also has a built-in data dictionary that stores templates for enterprise message formats, so it can perform transformations from one message format to another. Establish Open Database Connectivity – ODBC connections to Structured Query Language – SQL databases to retrieve data, which can be used to enrich the content of the message, or to insert or update rows in a database - page 8, lines 4 – 8, page 8, lines 28 - 30).

Regarding claim 7, Andy and Ichihara discloses all the claimed features,

but, are silent on, system for remote control of apparatuses according to claim 6, wherein the system operates in said "first mode when the size of said at least one buffer storage is 0, and in said second mode if not".

Petite teaches, method for monitoring and controlling remote devices. The computer evaluates the retrieved information and identifies an appropriate control signal, and applying the control signal at a designated actuator. A computerized system for monitoring, reporting on, and controlling remote systems by transferring information signals through a wide area network. The site controller 150 may be configured such that the memory 406 includes a look-up table 414 configured for identifying the various remote and intermediate communication devices used in generating and transmitting received data transmission (ABSTRACT, Figs. 1 – 11, column 1, lines 31 – 36, column 2, line 28 through column 3, line 30, column 11, lines 11 - 15). The memory 406 may also include a plurality code segments that are executed by the CPU 404, which may in large part control operation of the site controller 150 - Fig. 4, column 11, lines 41 - 56).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify monitoring and telemetry devices as part of enterprise information resources (combined Andy and Ichihara, wherein Andy, page 2, lines 8 – 10, page 4, lines 9 – 21, page 9, line 8), would have incorporated monitoring and controlling remote devices of Petite (Petete, ABSTRACT, Figs. 1 – 11, column 1, lines 31 – 36, column 2, line 28 through column 3, line 30, column 11, lines 11 - 15), for a system configured to collect, format, and control client application specific processes (Petite, column 1, lines 48 – 55 and Andy, enrich the content of the message, or to insert or update rows in a database - page 8, lines 4 – 8, page 8, lines 28 – 30).

Regarding claim 9, Andy and Ichihara discloses all the claimed features,

but, are silent on, system for remote control of apparatuses according to claim 1, wherein "at least some of said specific set of specific API functions are organised so as to be capable of providing at least two operations and/or acting on at least two distinct aspects, according to a predefined parameterization".

Petite teaches, method for monitoring and controlling remote devices. The computer evaluates the retrieved information and identifies an appropriate control signal, and applying the control signal at a designated actuator. A computerized system for monitoring, reporting on, and controlling remote systems by transferring information signals through a wide area network. The site controller 150 may be configured such that the memory 406 includes a look-up table 414 configured for identifying the various remote and intermediate communication devices used in generating and transmitting received data transmission (ABSTRACT, Figs. 1 – 11, column 1, lines 31 – 36, column 2, line 28 through column 3, line 30, column 11, lines 11 - 15).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify monitoring and telemetry devices as part of enterprise information resources (combined Andy and Ichihara, wherein Andy, page 2, lines 8 – 10, page 4, lines 9 – 21, page 9, line 8), would have incorporated monitoring and controlling remote devices of Petite (Petete, ABSTRACT, Figs. 1 – 11, column 1, lines 31 – 36, column 2, line 28 through column 3, line 30, column 11, lines 11 - 15), for a system configured to collect, format, and control client application specific processes (Petite, column 1, lines 48 – 55

and Andy, enrich the content of the message, or to insert or update rows in a database page 8, lines 4 – 8, page 8, lines 28 - 30).

Regarding claim 10, Andy discloses,

system for remote control of apparatuses according to claim I, wherein said set of specific API functions includes only 12 functions (the flow meter may send compressed data that's intelligible only to specific applications - page 6, lines 1 – 14, page 8, lines 13 – 32, page 9, lines 4 - 14, page 10, lines 7 - 19).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication from the examiner should be directed to Nimesh Patel at (571) 270-1228, normally reached on Mon-Thur. 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael, Perez-Gutierrez, can be reached at (571) 272-7915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-

/Nimesh Patel/ Patent Examiner (2617)

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/Rafael Pérez-Gutiérrez/ Supervisory Patent Examiner, Art Unit 2617